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EXAMINER

ROSARIO, DENNIS

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/078,713

Applicant(s)

NAMIZUKA, YOSHIYUKI

Examiner

Dennis Rosario

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/19/2002 and pre-amt. 04/08/2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The pre-amendment was received on April 8, 2002. Claims 1-44 are pending.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Figure 1 is missing reference numeral 10 as stated in page 4, line 15.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

Page 5, line 13: "documents" ought to be amended to "document".

Page 6, line 10: "outline intensity correction unit 25a" ought to be amended to "outline intensity correction unit 25**b**".

Page 7, line 23:"bid" ought to be amended to "bit".

Page 10, line 17: "Laplacean" ought to be amended to "Laplacian".

Page 12, line 6:"vale" ought to be amended to "value".

Appropriate correction is required.

Claim Objections

4. The following quotations of 37 CFR § 1.75(a) is the basis of objection:

(a) The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

5. Claim 9 is objected to under 37 CFR § 1.75(a) as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention or discovery.

Claim 9, line 2,"customize data" ought to be amended to "customized data".

6. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 40,41,42,43,44 and 45 have been renumbered 39,40,41,42,43 and 44, respectively.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-26,29-39 and 42-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Ueta et al. (US Patent 5,748,800 A).

Regarding claim 15, Ueta et al. discloses a system of processing image data, comprising the steps of:

a) an image data input unit (fig. 1, num. 43: CCD LINE SENSOR) for inputting image data (fig. 1, num. 43: CCD LINE SENSOR captures an image based upon "user indicat[ion]" or customization in col. 10, lines 34 and 35.);

b) a space filter process unit (fig. 1,num. 46 is an "edge contrast unit" in col. 3, line 41.) connected (via numerals 59,44,45) to said image data input unit (fig. 1, num. 43: CCD LINE SENSOR) for determining (fig. 3, num. 77: COMPAR. is a comparator.) whether or not a portion (Fig. 2.num. 43 is a portion of an image.) of the image data (fig. 1, num. 43: CCD LINE SENSOR) is an outline portion (edge portion) to generate an outline characteristic (Output of fig. 3, num. 77:COMPAR. generates edge data.);

c) an intensity correction unit or pre-correction unit (fig. 1,num. 45:CCD SIGANL PROCESSOR performs a shading correction in col. 3, lines 35 and 36.) connected (via an arrow between numerals 45 and 46.) to said space filter process unit (fig. 1,num. 46 is an "edge contrast unit" in col. 3, line 41.) for selecting a correction coefficient (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT.) from a set of predetermined correction coefficients (fig. 3, num. 49: CONT. COEF. INPUT UNIT contains "a preset...coefficient" in col. 4, lines 2-4.) based upon said outline characteristic (Output of fig. 3, num. 77:COMPAR. generates edge data that is used by fig. 3,num. 79.); and

d) applying the selected correction coefficient (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT which is applied via num. 82.) to the portion (Fig. 2.num. 43 is a portion of an image.) of the image data (fig. 1, num. 43: CCD LINE SENSOR).

Claim 1 is rejected the same as claim 15. Thus, argument similar to that presented above for claim 15 is equally applicable to claim 1, except that claim 1 is directed towards a method.

Regarding claim 2, Ueta discloses the method of processing image data according to claim 1 wherein the image data is scanned (fig. 1, num. 43: CCD LINE SENSOR captures an image based upon "user indicat[ion]" or customization in col. 10, lines 34 and 35.).

Claim 3 is rejected the same as claim 11. Thus, argument similar to that presented above for claim 11 is equally applicable to claim 3.

Regarding claim 4, Ueta et al. discloses the method of processing image data according to claim 1 wherein said correction coefficients (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT.) include intensity correction coefficients (Fig. 3,num. 49: CONT. COEF. INPUT UNIT contains coefficients for contrast or sharpness that is based on a "shading correction" in col. 3, lines 35 and 36. Thus the contrast coefficients contain a shading value or intensity.).

Claims 5,18 and 19 are rejected the same as claim 4. Thus, argument similar to that presented above for claim 4 is equally applicable to claims 5,18 and 19.

Regarding claim 6, Ueta et al. discloses the method of processing image data according to claim 1 further comprising additional steps of:

a) an operation unit (fig. 1,num. 57:INTERFACE) connected (via numerals 53,52,51 and 50.) to said space filter process unit(Fig. 1,num. 46) for inputting user input values (Fig. 3,num. 48: COMP COEF. INPUT UNIT obtains a user input coefficient in col. 3, lines 65-67.) prior (as shown by the arrows in figure 3.) to said selecting step (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT.); and

b) selecting said correction coefficient (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT.) from said set of said predetermined correction coefficients (fig. 3, num. 49: CONT. COEF. INPUT UNIT) based upon said outline characteristic (Output of fig. 3, num. 77:COMPAR. generates edge data.) and a combination of said user input values (Fig. 3,num. 48: COMP COEF. INPUT UNIT obtains a user input coefficient in col. 3, lines 65-67 and is inputted to fig. 3,num. 77: COMPAR.).

Regarding claim 7, Ueta et al. discloses the method of processing image data according to claim 6 wherein said user input values (Fig. 3,num. 48: COMP COEF. INPUT UNIT obtains a user input coefficient in col. 3, lines 65-67.) include an intensity notch signal (Fig. 3,num. 48: COMP COEF. INPUT UNIT is a "multi-position switch" in col. 4, lines 1 and 2.).

Regarding claim 8, Ueta discloses the method of processing image data according to claim 6 wherein said user input values (Fig. 3,num. 48: COMP COEF. INPUT UNIT obtains a user input coefficient in col. 3, lines 65-67.) include an image type signal (Fig. 3, label "IMAGE SIGNAL").

Regarding claim 9, Ueta discloses the method of processing image data according to claim 6 wherein said user input values (Fig. 3,num. 48: COMP COEF. INPUT UNIT obtains a user input coefficient in col. 3, lines 65-67.) include customize data (An image based upon "user indicat[ion]" or customization in col. 10, lines 34 and 35.).

Regarding claim 10, Ueta et al. discloses the method of processing image according to claim 6 wherein said user input values (Fig. 3,num. 48: COMP COEF. INPUT UNIT obtains a user input coefficient in col. 3, lines 65-67.) include a background removal signal (Fig. 3,num. 49: CONT. COEF. INPUT UNIT receives an user input for correcting contrast or "suppressing contrast... noise" in the abstract.).

Regarding claim 11, Ueta et al. discloses the method of processing image data according to claim 1 further comprising additional steps of:

a) further determining an image intensity level (Fig. 1, num. 45: CCD SIGNAL PROCESSOR performs a shading correction in col. 3, lines 34-36.) of the portion (Fig. 2.num. 43 is a portion of an image to be corrected by fig. 1,num. 45: CCD SIGNAL PROCESSOR.) of the image data (fig. 1, num. 43: CCD LINE SENSOR) prior (as shown in fig. 1.) to said applying step (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT which is applied via num. 82 and corresponds to fig. 1,num. 46.); and

b) selecting said correction coefficient (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT.) from said set of said predetermined correction coefficients (fig. 3, num. 49: CONT. COEF. INPUT UNIT) based upon said outline characteristic (Output of fig. 3, num. 77:COMPAR. generates edge data.) and said image intensity level (Fig. 1, num. 45: CCD SIGNAL PROCESSOR performs a shading correction in col. 3, lines 34-36 and is inputted into fig. 1,num. 46.).

Regarding claim 12, Ueta et al. discloses the method of processing image data according to claim 11 wherein said predetermined correction coefficients (fig. 3, num. 49: CONT. COEF. INPUT UNIT contains "a preset...coefficient" in col. 4, lines 2-4.) are previously stored in a table (Fig. 1,num. 55: ROM contains "parameters...[that] set the...coefficient..." in col. 10, lines 27-30. Thus, fig. 1,num. 55: ROM generates a preset coefficient based on parameters.).

Claim 16 is rejected the same as claim 2. Thus, argument similar to that presented above for claim 2 is equally applicable to claim 16.

Regarding claim 17, Ueta discloses the system for processing image data according to claim 16 further comprising a precorrection unit (Fig. 1,num. 45: CCS SIGANL PROCESSOR performs a shading correction in col. 3, lines 34-36) connected to said scanner (fig. 1, num. 43: CCD LINE SENSOR), and said space filter process unit (fig. 1,num. 46 is an "edge contrast unit" in col. 3, line 41.) for correcting the scanned image data (fig. 1, num. 43: CCD LINE SENSOR captures an image) to generate preprocessed image data (Output of fig. 1,num. 45) prior to outputting the preprocessed image data to said space filter process unit (fig. 1,num. 46).

Claims 21 and 22 are rejected the same as claim 7. Thus, argument similar to that presented above for claim 7 is equally applicable to claims 21 and 22.

Claim 23 is rejected the same as claim 9. Thus, argument similar to that presented above for claim 9 is equally applicable to claim 23.

Claim 24 is rejected the same as claim 10. Thus, argument similar to that presented above for claim 10 is equally applicable to claim 24.

Regarding claim 25, Ueta et al. discloses the system for processing image data according to claim 15 wherein

a) said space filter process unit (fig. 1,num. 46 is an "edge contrast unit" in col. 3, line 41.) further determines an image intensity level (fig. 1,num. 46 shown in detail in fig. 3 determines an image intensity level at fig. 3,num. 47 based upon a shaded corrected signal from fig. 1,num. 45.) of the portion (Fig. 2.num. 43 is a portion of an image.) of the image data (fig. 1, num. 43: CCD LINE SENSOR) prior (as shown in fig. 1.) to applying (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT which is applied via num. 82 and corresponds to fig. 1,num. 46.) the selected correction coefficient (fig. 3,num. 79 is a switch that selects a coefficient from fig. 3,num. 49: CONT. COEF. INPUT UNIT which is applied via num. 82.); and

b) The remaining limitation was rejected in claim 11.

Regarding claim 26, Ueta et al. discloses the system for processing image data according to claim 25 further comprises a storage unit (fig. 3,num. 81: CONT COEF. OUTPUT UNIT stores coefficients.) connected (via numerals 79,77,76,74,75 and 71-73) to said intensity correction unit (Fig. 1,num. 45.) for storing the predetermined correction coefficients in a table format (fig. 3, num. 49: CONT. COEF. INPUT UNIT contains "a preset...coefficient" in col. 4, lines 2-4 that are inputted to storage 81.).

Claim 29 has been addressed in claims 1 and 15 except for the limitation of a storage medium for storing computer readable instructions which are disclosed in Ueta et al. in col. 3, line 60: "programs stored in RAM").

Claim 30 is rejected the same as claim 2. Thus, argument similar to that presented above for claim 2 is equally applicable to claim 30.

Claim 31 is rejected the same as claim 3. Thus, argument similar to that presented above for claim 3 is equally applicable to claim 31.

Claims 32 and 33 are rejected the same as claim 4. Thus, argument similar to that presented above for claim 4 is equally applicable to claim 32 and 33.

Claim 34 is rejected the same as claim 7. Thus, argument similar to that presented above for claim 7 is equally applicable to claim 34.

Claim 35 is rejected the same as claim 8. Thus, argument similar to that presented above for claim 8 is equally applicable to claim 35.

Claim 36 is rejected the same as claim 9. Thus, argument similar to that presented above for claim 9 is equally applicable to claim 36.

Claim 37 are rejected the same as claim 10. Thus, argument similar to that presented above for claim 10 is equally applicable to claim 37.

Claim 38 is rejected the same as claim 11. Thus, argument similar to that presented above for claim 11 is equally applicable to claim 38.

Claim 39 is rejected the same as claim 12. Thus, argument similar to that presented above for claim 12 is equally applicable to claim 39.

Claims 42-44 are rejected the same as claims 12 and 25. Thus, argument similar to that presented above for claims 12 and 25 are equally applicable to claims 42-44.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 13,14,27,28,40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueta et al. (US Patent 5,748,800 A) in view of .

Regarding claim 13, Ueta et al. does not teach the limitation of claim 13, but does suggest a scanning direction to obtain an edge as shown in fig. 2 and suggests other methods of obtaining an edge using "relative adjacent elements in a spatial arrangement...(col. 11, lines 3-5)." Thus, a spatial arrangement can contain a direction between two elements.

However, Kawamura et al. teaches the spatial arrangement as suggested by Ueta et al. as shown in fig. 1, label PN1h and a method of processing image data wherein a determining step (fig. 1, label: SECOND JUDGMENT) further determines whether or not an outline portion (Fig. 1, label: PN1h shows an edge) has a particular direction (Fig. 1, label: PN1h shows an edge with a horizontal direction as shown.).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Ueta et al.'s teaching of a scanning direction with Kawamura et al.'s teaching of determining an edge with direction, because Kawamura et al.'s teaching "properly interpolate[es] image signals having various patterns (Kawamura et al., col. 2, lines 65-67)."

Claims 14,27,28,40 and 41 are rejected the same as claim 13. Thus, argument similar to that presented above for claim 13 is equally applicable to claims 14,27,28,40 and 41.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fukase et al. (US Patent 5,926,578 A) is pertinent as teaching a method of a user enhancing edges, fig. 9, num. 95A, via a "USM" button in fig. 9, num. 52C.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is 703-305-5431. The examiner can normally be reached on 6-3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 703-308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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